

RETURN of NUMBER of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1886.

District and Date of Notice.	Description of Machinery.	Parts required to be fenced.
WELLINGTON—		
1885.		
April 13 ...	Bush saw-mill ...	The main driving-belts of circular saw.
April 16 ...	Bush saw-mill ...	The fly-wheel of engine and main driving-belt.
April 21 ...	Bush saw-mill ...	The driving-belt of circular saw and counter-shaft.
April 27 ...	Bush saw-mill ...	The main driving-belt and saw-gummer.
May 19 ...	Biscuit factory ...	The fly-wheel of engine, and gear of rollers.
MARLBOROUGH—		
1885.		
June 11 ...	Bush saw-mill ...	Driving-belts of circular saws, and piston-rod of engine.
June 13 ...	Bush saw-mill ...	All the driving-belts from counter-shaft to circular saws.
June 13 ...	Flax-mill ...	The driving-belts of two stripping machines.
NELSON NORTH—		
1885.		
July 17 ...	Quartz-crushing ...	The fly-wheel of engine, and gearing of counter-shaft.
July 21 ...	Bush saw-mill ...	The fly-wheel of engine, and driving-belts of circular saws.
July 21 ...	Bush saw-mill ...	The driving-belts of vertical and circular saws.
July 29 ...	Cutting chaff ...	The driving-belt from engine to chaff-cutter.
TARANAKI—		
1885.		
Oct. 6 ...	Bush saw-mill ...	The back part of fly-wheel of engine, and main driving-belt from fly-wheel to counter-shaft.
HAWKE'S BAY—		
1886.		
Jan. 22 ...	Bush saw-mill ...	New mill. All the driving-belts and the fly-wheel of engine.
Feb. 9 ...	Bush saw-mill ...	New mill. All the driving-belts from engines to counter-shaft, and counter-shaft to saws.
Feb. 10 ...	Bush saw-mill ...	New mill. All the driving-belts from engine to counter-shaft, and counter-shaft to saws.
Feb. 11 ...	Bush saw-mill ...	New mill. The driving-belts of circular saws.
Feb. 25 ...	Cooperage ...	The fly-wheel of engine and main driving-belt.

The INSPECTOR of MACHINERY, OTAGO DISTRICT, to the CHIEF INSPECTOR of MACHINERY.

SIR,—

Office of Inspector of Machinery, Dunedin, 7th May, 1886.

I have the honour to forward you the annual report of inspection of boilers and machinery in the Otago District during the financial year ended the 31st March, 1886, contained in the enclosed tables.

In doing so I have much pleasure in bringing under your notice the small number of accidents (2), and these happily not of a serious nature. You will also observe by the report that they have not been occasioned through any want of fencing, but simply accidental, and such as are likely to occur to persons engaged among machinery.

The accidents to boilers were two in number, and not of a dangerous character. In the one case, the boiler, which is a return tubular, was placed close to the ground and merely built round about, so that it was only a question of time how long the plate would last. The other, a circular longitudinal tubular boiler, fired externally, was allowed to run too long without being cleaned, the consequence being an accumulation of scale, which caused the plate to crack through the line of rivet-holes in the circular seam over the bridge. A piece was cut out, boiler retubed and thoroughly cleaned, and is now in good order and condition. The feed-water here is bad.

Four steam-digesters have been set aside as unfit for use, by agreement, rather than put in the necessary repairs required to make them good. These are being replaced in the one case by two new steel ones, and in the other by two good second-hand ones.

The rapid deterioration of the crowns and angle-irons on the crowns of digesters is due to the chemical action of fatty acids, which appear to concentrate about the top, and which are generated in the process of the work, and in many cases exist already in the partly-decomposed state of the substances used.

I invariably recommend in these cases, as the best means of preservation, frequent and thorough cleaning over the crown and about 18in. down the sides (as this is the only part attacked); but owing to the nature of the work this is seldom attended to.

In the table of defects there are nine cases of corrosion mentioned. In some of these cases it is not preventible; but there are a great number of cases of oxidation going on which are caused